TRANSACTIONS

OF THE

American Society of Civil Engineers

INDEX

VOLUME LXXI

MARCH, 1911

SUBJECT INDEX, PAGE 456

AUTHOR INDEX, PAGE 460

Titles of papers are in quotation marks when given with the author's name.

VOLUME LXXI

SUBJECT INDEX

ARCHES.

"The Arch Principle in Engineering and Esthetic Aspects, and Its Application to Long Spans." C. R. Grimm. (With Discussion.) 233.

BRIDGES.

"The Arch Principle in Engineering and Esthetic Aspects, and Its Application to Long Spans." C. R. Grimm. 233. Discussion: Max M. Miller, Leon S. Moisseiff, Fr. Engesser, R. Krohn, R. S. Buck, Ernst Jonson, Gustav Lindenthal, and Paul Chapman, 249.

BUILDINGS.

"Rust—As Shown in the Removal of a Seventeen-Story Building." T. Kennard Thomson. 200. Discussion: E. L. Verveer, A. W. Carpenter, F. Lavis, S. M. Purdy, R. A. MacGregor, J. B. French, and F. W. Gardiner, 202.

CANALS.

"The Tieton Canal." E. G. Hopson. (With Discussion.) 158.

COAL POCKETS.

"Two Reinforced Concrete — ." Myron S. Falk. 192.

CURRENT METERS.

See **METERS.**

DAMS.

"The Failure of the Yuba River Débris Barrier, and the Efforts Made for Its Maintenance." H. H. Wadsworth. 217. Discussion: William W. Harts, W. C. Hammatt, and Thomas C. Atwood, 228.

ELECTRIC LIGHTING.

Lighting of the Washington Terminal Station. 50.

ELECTRIC POWER.

Power plant for Washington Passenger Terminals. 76.

ESTHETICS.

"The Arch Principle in Engineering and Esthetic Aspects, and Its Application to Long Spans." C. R. Grimm. (With Discussion.) 233.

HARBORS.

"Notes on the Bar — at the Entrances to Coos Bay, and Umpqua and Siuslaw Rivers, Oregon." Morton L. Tower. 349. Discussion: Lewis M. Haupt, 360.

HYDROMETRY.

"— as an Aid to the Successful Operation of an Irrigation System." J. C. Stevens. 314. Discussion: E. F. Chandler, C. E. Shipman, Clemens Herschel, and Robert Follansbee, 342.

IRRIGATION.

"Hydrometry as an Aid to the Successful Operation of an — System." J. C. Stevens. (With Discussion.) 314.

"The Tieton Canal." E. G. Hopson. 158. Discussion: Horace W. Sheley, and H. F. Dunham, 185.

JETTIES.

"Notes on the Bar Harbors at the Entrances to Coos Bay, and Umpqua and Siuslaw Rivers, Oregon." Morton L. Tower. (With Discussion.) 349.

LANDSLIDES.

"Remedies for — and Slips on the Kanawha and Michigan Railway." R. P. Black. (With Discussion.) 1.

MEMOIRS OF DECEASED MEMBERS.

Biddle, William Foster. 401.
Carpenter, Clarence Allan. 403.
Church, George Earl. 405.
Comfort, Silas Gildersleeve. 452.
Cutshaw, Wilfred Emory. 408.
Davis, Charles. 411.
Dawley, Edwin Peleg. 413.
Farnham, Irving Tupper. 415.
Goad, Charles Edward. 418.
Henry, Daniel Farrand. 420.
Irwin, Roger Brooke. 448.
Lederle, George Anthony. 423.
Libby, Edmund Dorman. 424.
McBee, Vardry Echols, Jr. 449.
McCurdy, John Egbert. 426.
McKeown, Thomas. 428.
McVean, John Jay. 430.
Myers, George Higgins. 454.
Pearson, William Anson, Jr. 431.
Robinson, Stillman Williams. 433.
Soper, Ralph Carroll. 450.

Sproul, Archibald Alexander, Jr. 435.
Taylor, Norman Alfred. 451.
Thomson, George Huntington. 438.
Thorp, Richard Fenwick. 442.
Willard, James Eager. 445.

METERS.

"Hydrometry as an Aid to the Successful Operation of an Irrigation System." J. C. Stevens. (With Discussion.) 314.

PAINT.

"Rust—As Shown in the Removal of a Seventeen-Story Building." T. Kennard Thomson. (With Discussion.) 200.

PRESERVATION OF TIMBER.

"Timber Preservation; Its Development and Present Scope." Walter Buehler. 364. Discussion: Richard Lamb, J. Martin Schreiber, George W. Tillson, Ernest F. Hartmann, A. L. Dean, and Clifford Richardson, 374.

RAILROAD STATIONS.

"The Reconstruction of the Passenger Terminals at Washington, D. C." W. F. Strouse. 11.

RAILROAD TERMINALS.

"The Reconstruction of the Passenger Terminals at Washington, D. C." W. F. Strouse. 11.

RAILROADS.

"Remedies for Landslides and Slips on the Kanawha and Michigan Railway." R. P. Black. 1. Discussion: Charles H. Miller, 8.
"The Reconstruction of the Passenger Terminals at Washington, D. C." W. F. Strouse. 11.

REFRIGERATOR SYSTEMS.

Refrigerating plant at the Washington Terminal Station. 100.

REINFORCED CONCRETE.

Sections of pipe line for Tieton Canal. 158.
"Two — Coal Pockets." Myron S. Falk. 192.

RIVERS.

"The Failure of the Yuba River Débris Barrier, and the Efforts Made for Its Maintenance." H. H. Wadsworth. (With Discussion.) 217.

SIGNALING.

Interlocking plant for Washington Passenger Terminals. 112.

STEEL.

"Rust — As Shown in the Removal of a Seventeen-Story Building." T. Kennard Thomson. (With Discussion.) 200.

TUNNELS.
First St. Tunnel, Washington, D. C. 134.

VENTILATION.
— of the First St. Tunnel, Washington, D. C. 144.

WATER, FLOW OF, IN OPEN CHANNELS.
"Hydrometry as an Aid to the Successful Operation of an Irrigation System." J. C. Stevens. (With Discussion.) 314.
"The Tieton Canal." E. G. Hopson. (With Discussion.) 158.

WAVES.
"A Theory of the Water Wave." Morton F. Sanborn. 284.

AUTHOR INDEX

ATWOOD, THOMAS C.
The Yuba River débris barrier. 231.

BIDDLE, WILLIAM FOSTER.
Memoir of. 401.

BLACK, R. P.
"Remedies for Landslides and Slips on the Kanawha and Michigan Railway." 1.

BUCK, R. S.
The arch principle in long-span bridges. 259.

BUEHLER, WALTER.
"Timber Preservation; Its Development and Present Scope." 364.

CARPENTER, A. W.
Rust in a seventeen-story building. 203.

CARPENTER, CLARENCE ALLAN.
Memoir of. 403.

CHANDLER, E. F.
Hydrometry as an aid in irrigation. 342.

CHAPMAN, PAUL.
The arch principle in long-span bridges. 271.

CHURCH, GEORGE EARL.
Memoir of. 405.

COMFORT, SILAS GILDERSLEEVE.
Memoir of. 452.

CUTSHAW, WILFRED EMORY.
Memoir of. 408.

DAVIS, CHARLES.
Memoir of. 411.

DAWLEY, EDWIN PELEG.
Memoir of. 413.

DEAN, A. L.
Timber preservation. 395.

DUNHAM, H. F.
The Tieton Canal. 187.

ENGESSER, FR.
The arch principle in long-span bridges. 257.

FALK, MYRON S.
"Two Reinforced Concrete Coal Pockets." 192.

FARNHAM, IRVING TUPPER.
Memoir of. 415.

FOLLANSBEE, ROBERT.
Hydrometry as an aid in irrigation. 346.

FRENCH, J. B.
Rust in a seventeen-story building. 209.

GARDINER, F. W.
Rust in a seventeen-story building. 211.

GOAD, CHARLES EDWARD.
Memoir of. 418.

GRIMM, C. R.
"The Arch Principle in Engineering and Esthetic Aspects, and Its Application to Long Spans." 233.

HAMMATT, W. C.
The Yuba River débris barrier. 229.

HARTMANN, ERNEST F.
Timber preservation. 388.

HARTS, WILLIAM W.
The Yuba River débris barrier. 228.

HAUPT, LEWIS M.
Bar harbors on the coast of Oregon. 360.

HENRY, DANIEL FARRAND.
Memoir of. 420.

HERSCHEL, CLEMENS.
Hydrometry as an aid in irrigation. 344.

HOPSON, E. G.
"The Tieton Canal." 158.

IRWIN, ROGER BROOKE.
Memoir of. 448.

JONSON, ERNST.
The arch principle in long-span bridges 267.

KROHN, R.
The arch principle in long-span bridges. 258.

LAMB, RICHARD.
Timber preservation. 374.

LAVIS, F.
Rust in a seventeen-story building. 208.

LEDERLE, GEORGE ANTHONY.
Memoir of. 423.

LIBBY, EDMUND DORMAN.
Memoir of. 424.

LINDENTHAL, GUSTAV.
The arch principle in long-span bridges. 270.

MacGREGOR, R. A.
Rust in a seventeen-story building. 209.

McBEE, VARDRY ECHOLS, Jr.
Memoir of. 449.

McCURDY, JOHN EGBERT.
Memoir of. 426.

McKEOWN, THOMAS.
Memoir of. 428.

McVEAN, JOHN JAY.
Memoir of. 430.

MILLER, CHARLES H.
Remedies for landslides and slips. 8.

MILLER, MAX M.
The arch principle in long-span bridges. 249.

MOISSEIFF, LEON S.
The arch principle in long-span bridges. 252.

MYERS, GEORGE HIGGINS.
Memoir of. 454.

PEARSON, WILLIAM ANSON, Jr.
Memoir of. 431.

PURDY, S. M.
Rust in a seventeen-story building. 209.

RICHARDSON, CLIFFORD.
Timber preservation. 399.

ROBINSON, STILLMAN WILLIAMS.
Memoir of. 433.

SANBORN, MORTON F.
"A Theory of the Water Wave." 284

SCHREIBER, J. MARTIN.
Timber preservation. 382.

SHELEY, HORACE W.
The Tieton Canal. 185.

SHIPMAN, C. E.
Hydrometry as an aid in irrigation. 343.

SOPER, RALPH CARROLL.
Memoir of. 450.

SPROUL, ARCHIBALD ALEXANDER, Jr.
Memoir of. 435.

STEVENS, J. C.
"Hydrometry as an Aid to the Successful Operation of an Irrigation System." 314.

STROUSE, W. F.
"The Reconstruction of the Passenger Terminals at Washington, D. C." 11.

TAYLOR, NORMAN ALFRED.
Memoir of. 451.

THOMSON, GEORGE HUNTINGTON.
Memoir of. 438.

THOMSON, T. KENNARD.
"Rust—As Shown in the Removal of a Seventeen-Story Building." 200.

THORP, RICHARD FENWICK.
Memoir of. 442.

TILLSON, GEORGE W.
Timber preservation. 384.

TOWER, MORTON L.
"Notes on the Bar Harbors at the Entrances to Coos Bay, and Umpqua and Siuslaw Rivers, Oregon." 349.

VERVEER, E. L.
Rust in a seventeen-story building. 202.

WADSWORTH, H. H.
"The Failure of the Yuba River Débris Barrier, and the Efforts Made for Its Maintenance." 217.

WILLARD, JAMES EAGER.
Memoir of. 445.